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1 2 3 4 5 6 7 8 9 10 11 12 13

**FIG. 1A**

Antenna /  
Maxillary Palp

-3.0  
-1.0  
-0.5

**FIG. 1B**

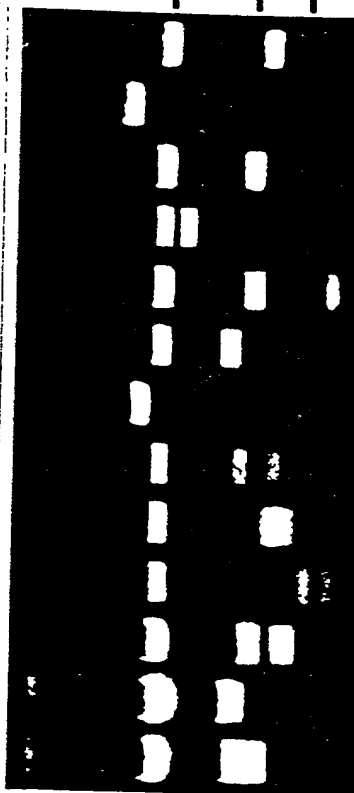
Head Minus  
Antenna /  
Maxillary Palp

-3.0  
-1.0  
-0.5

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**FIG. 1C****Virgin  
Female Body**

— 3.0  
— 1.0  
— 0.5

**FIG. 1D**

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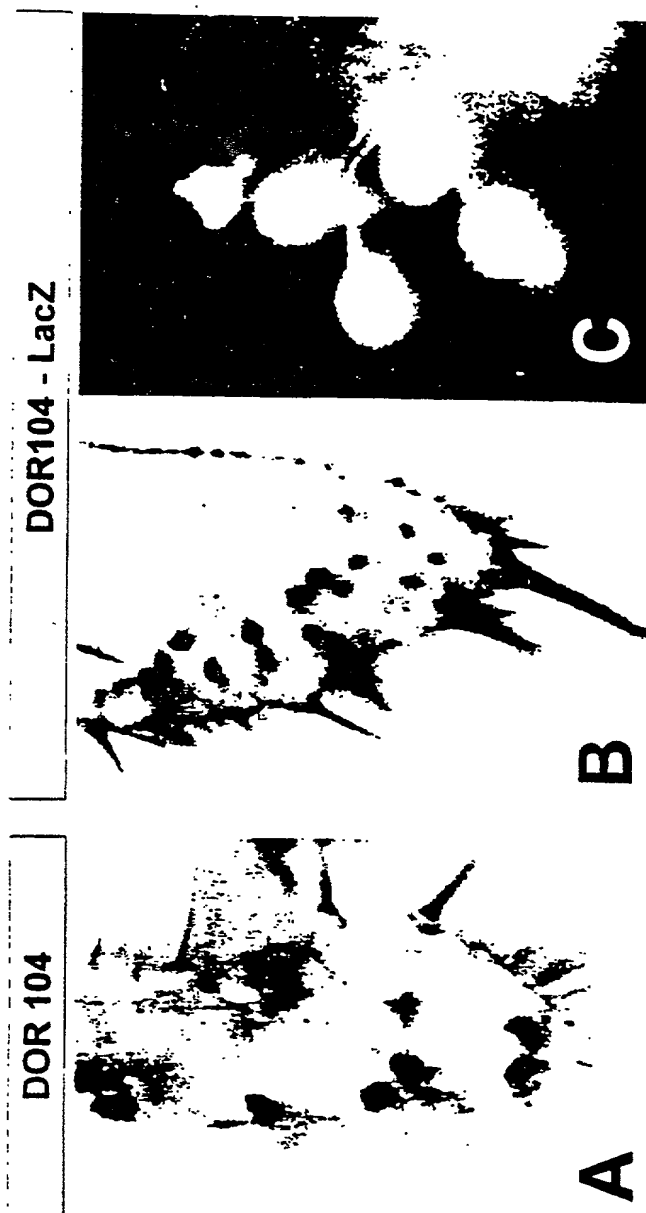


FIG. 2C

FIG. 2B

FIG. 2A

DOR87		20	M I L E D J G L V G U N V R M H L A A V T Y P T P U S S W R K . . . . F A E V L P V T A M N L M Q F V V I L R	60	70	80
DOR85J			M W S F G W T E P E N K R R W I L P Y X L W L A . . . . . I V N I V M I L L P T I S I S T E Y L I I			
DOR87			M W S T G W T Y P E N K R R W D L H Y K L W S T . . . . . I V T L V I E L L P I S T S V E Y I I			
DOR104			S I D P A R E S N L F R L M G L Q L A N O T K P S P R L P K W W P K R L E M I O K V L P K A Y C S M V I F S T S V E Y I I			
DOR84			M K L S E T L K I D Y F R V Q L N A W R I C G A L D L S E . . . . . O R Y W S W S M L C U L V V I P T P M L L R G			
DOR71g			M V I J D S L S F Y R P F W I C M R L V P T F F K D S S R P . . . . . V Q L Y V L I H L L V T W I H L L I I H			
DOR72g			M D L K P R V I N S E D I Y R T Y W L Y W H L G L E S N F F . . . . . L N R I T D L V I T I F V T I W Y H I I I I O			
DOR73g			M D S R R K V R S E N Y K T Y W L Y W R L I G V E O D Y P . . . . . F R R L V D E F T I T S F I T L F F V H I I I I O			
DOR62g			M E K Q E D F K L N T H S A V Y H W R V W E L T O L M R P P . . . . . G V S S L I V V Y V T S T V N L V T V L L S L L A R			
DOR224g			M R P T L Q V L I S V L C L S V A V A W R D H T D C N D H Y I . . . . . E F M D Y P D E R A T A Y S N E S E W D F F E F W R Q			
DOR46g			M A E V R V D S L E F F K S H W T A W Y G V A H F R V E - N W K N L Y V F Y S I V N L V T C Y V I U G U S F			
DOR19g			M V T E D F Y K Y Q V N L G V W Q L P T W A A D H Q R R F Q S W R F G F I V I L F M L L F S F E M			

[illegible][illegible]

**A**

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## IV

[illegible]

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FIG. 4A      FIG. 4B      FIG. 4C

DOR 67	DOR 53	DOR 62
--------	--------	--------



DOR 87      DOR 64      67+53+62+87+64



FIG. 4D      FIG. 4E      FIG. 4F

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DOR 71      DOR 72      DOR 73

G

H



FIG. 4G

FIG. 4H

FIG. 4I





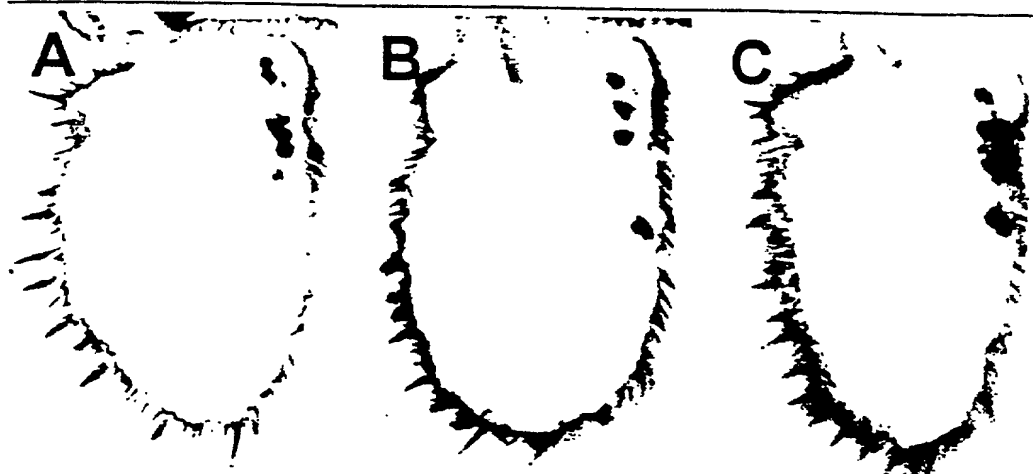
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FIG. 6A

FIG. 6B

FIG. 6C

DOR 53



DOR 87

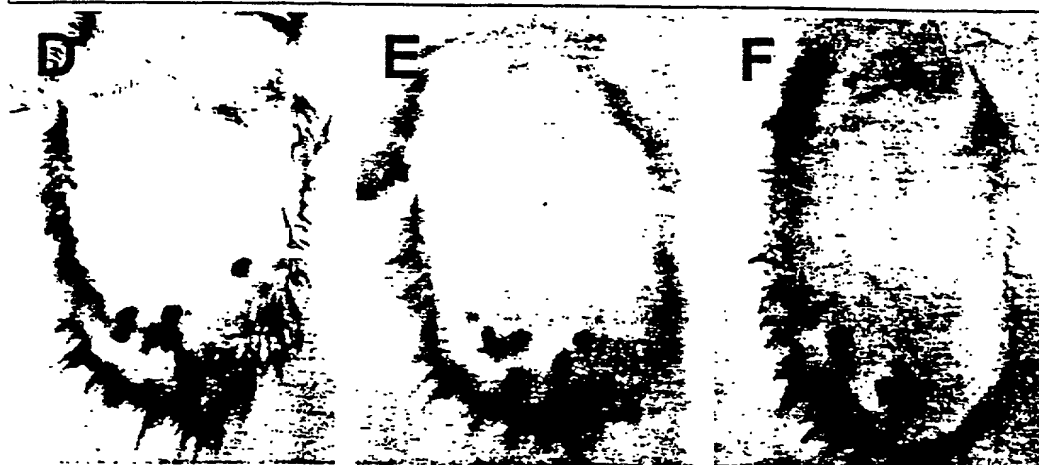


FIG. 6D

FIG. 6E

FIG. 6F

093327 08170 102180 222660

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FIG. 7A

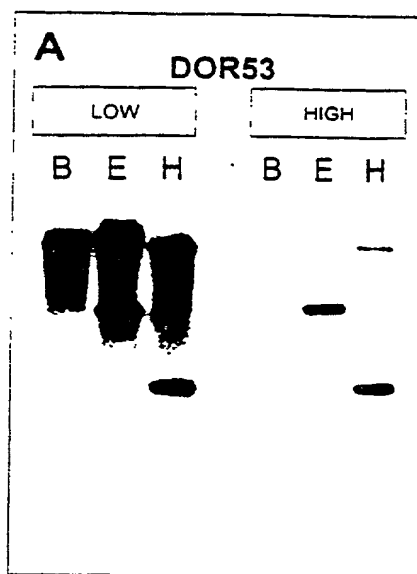


FIG. 7B

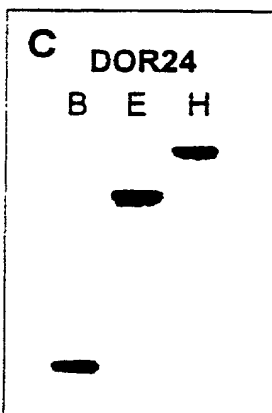
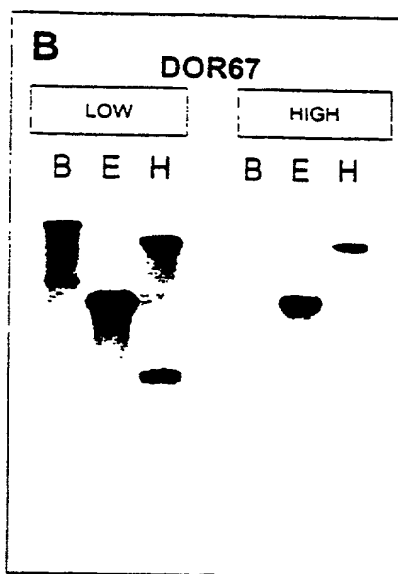


FIG. 7C

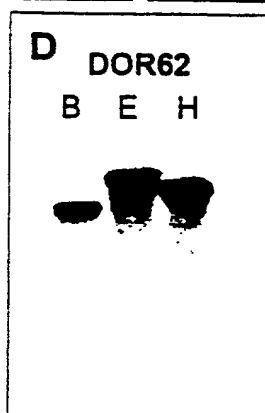


FIG. 7D

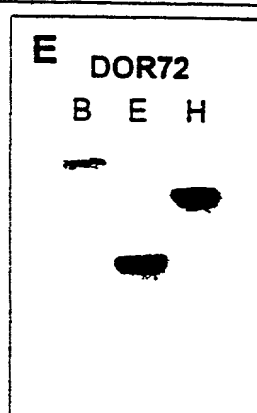


FIG. 7E

## FIG. 8A

DOR62 [AF127921]

LOCUS XXXXX 553 bp mRNA INV 02-FEB-1999  
 DEFINITION Drosophila melanogaster putative odorant receptor DOR62 mRNA, partial cds.  
 ACCESSION AF127921  
 KEYWORDS .  
 SOURCE fruit fly.  
 ORGANISM Drosophila melanogaster  
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.  
 REFERENCE 1 (bases 1 to 553)  
 AUTHORS Leslie B. Vosshall, Hubert Amrein, Pavel S. Morozov, Andrey Rzhetsky, and Richard Axel.  
 TITLE A Spatial Map of Olfactory Receptor Expression in the Drosophila Antenna  
 JOURNAL Cell (1999) In press  
 REFERENCE 2 (bases 1 to 553)  
 AUTHORS Vosshall, L.B., Amrein, H., Morozov, P.S., Rzhetsky, A. and Axel, Richard.  
 TITLE Direct Submission  
 JOURNAL Submitted (02-FEB-1999) Department of Biochemistry and Molecular Biophysics, HHMI-Columbia University, 701 West 168th Street, New York, NY 10032, USA

FEATURES Location/Qualifiers  
 Comment: /product='odorant receptor DOR62'  
 /tissue\_type='adult antenna'  
 /note='putative seven transmembrane G protein coupled receptor; genomic DNA sequenced by the European Drosophila Genome Project and given accession number 62D9.q'  
 source 1..553  
 /organism='Drosophila melanogaster'  
 /strain='Oregon R'  
 /db\_xref='taxon:7227'  
 /chromosome='X'  
 /map='2F'  
 gene <1..553  
 /note='Drosophila melanogaster odorant receptor DOR62'  
 /gene='DOR62'  
 CDS <1..459  
 /gene='DOR62'  
 /note='odorant receptor'  
 /codon\_start=1  
 /product='DOR62'

/translation="QELIECIRDLARVHRLREIIQRVLSVPCMAQFVCSAAVQCTVAM  
 HFLYVADDHDHTAMIISIVFFSAVTLEVFVICYFGDRMRTQSEALCDAFYDCNWIEQL  
 PKFKRELLFTLARTQRPSLIYAGNYIALSLETFEQVMRFTYSVFTLLLRAX"

BASE COUNT 141 a 145 c 132 g 135 t

## ORIGIN

```

1  caggaactca  tcgagtgcac  ccgcgatctg  gcgcgggtcc  atcggtgag  ggagatcatt
61  cagcgggtcc  ttccagtccc  ctgcatggcc  cagttcgtct  gtcgccgcgc  cgtccagtgt
121 accgtcgcca  tgcacttcct  gtacgtagcg  gatgaccacg  accacaccgc  catgatcatc
181 tcgattgtat  tttctcggc  cgtcaccttg  gaggtgtttg  taatctgcta  ttttggggac
241 aggatgcgga  cacagagcga  ggcgctgtgc  gatgccttct  acgattgcaa  ctggatagaa
301 cagctgcccc  agttcaagcg  cgaactgctc  ttcaccctgg  ccaggacgca  gcggccttct
361 cttattttacg  caggcaacta  catcgcactc  tcgctggaga  ccttcgagca  ggtcatgagg
421 ttcacatact  ctgttttcac  actcttgctg  agggccaagt  aagaacttta  taatctcttt
481 ttgggggagaa  aaatttttaa  gcacaatagc  agaaaaatat  atcagataat  ataacaaaaa
541 aaaaaaaaaa  aaa

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## FIG. 8B-1

DOR104[AF127922]

LOCUS XXXXX 1493 bp mRNA INV 02-FEB-1999  
 DEFINITION Drosophila melanogaster odorant receptor DOR104 mRNA, complete cds.  
 ACCESSION AF127922  
 KEYWORDS .  
 SOURCE fruit fly.  
 ORGANISM Drosophila melanogaster  
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

REFERENCE 1 (bases 1 to 1493)  
 AUTHORS Leslie B. Vosshall, Hubert Amrein, Pavel S. Morozov, Andrey Rzhetsky and Richard Axel.  
 TITLE A Spatial Map of Olfactory Receptor Expression in the Drosophila Antenna  
 JOURNAL Cell (1999) In press

REFERENCE 2 (bases 1 to 1493)  
 AUTHORS Vosshall, L.B., Amrein, H., Morozov, P.S., Rzhetsky, A. and Axel, R.  
 TITLE Direct Submission  
 JOURNAL Submitted (02-FEB-1999) Department of Biochemistry and Molecular Biophysics, HHMI-Columbia University, 701 W. 168th Street, New York, NY 10025, USA

FEATURES Location/Qualifiers  
 Comment: /tissue\_type='adult maxillary palp'  
 /note='putative seven transmembrane G protein coupled receptor'  
 source 1..1493  
 /organism="Drosophila melanogaster"  
 /strain="Oregon R"  
 /db\_xref="taxon:7227"  
 /chromosome="III"  
 /map="85B"  
 gene 1..1493  
 /note="odorant receptor"  
 /gene="DOR104"  
 CDS 21..1421  
 /gene="DOR104"  
 /note="odorant receptor"  
 /codon\_start=1  
 /product="DOR104"

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 PRLPKWWPKRLEMIGKVL PKAYCSMVI FTSLHLGVLF TKTTLDVLP TGELQAITDAL T  
 MTIIYFFTGYGTIYWCLRSRRL LAYMEH MNREYRHSLAGVTFVSSHAAFRMSRNFTV  
 VWIMSCLLGVISWGVSPMLGIRMLPLQCWYFFDALGPGTYTAVYATQLFGQIMVGMT  
 FGFGGS L FVTLSLLLLGQFDVLYCSLKNLDAHTKLLGGESVNGLSSLQEELLLGDSKR  
 ELNQYVLLQEHPTDLLRLSAGRKCPDQGNAFHNALVE CIRLHRFILHCSQEL ENLFSP  
 YCLVKSLQITTFQLCLLVFVGVS GTREVLRIVNQLQYLGLTIFELLMFTYCGELLSRHS  
 IRSGDAFWRC AWWKHAHFIRQDILIFLVNSRRAVHVTAGKFYVMDVNRLRSVITQAFS  
 FLTLLQKLA AKKTESEL"

BASE COUNT 332 a 373 c 407 g 381 t

AF127922.1

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FIG. 8B-2

ORIGIN

```
1 ggcacgagca gtcgatggcc agtcttcagt tccacggcaa cgtcgatgcg gacatcaggt
61 atgatattag cctggatccg gctagggaaat cgaatctctt ccgtctgcta atgggactcc
121 agttggcgaa tggcacgaag ccatcgccgc ggttacccaa atgggtggcca aagcggctgg
181 aaatgattgg taaagtgtg cccaaagcct attgttccat ggtgattttc acctccctgc
241 atttgggtgt cctgttcacg aaaaccacac tggatgtcct gccgacgggg gagctgcagg
301 ccataacgga tgccttcacc atgaccataa tatacttttt cacgggctac ggcaccatct
361 actgggtgcct gcgctcccgg cgctctttgg cctacatgga gcacatgaac cgggagtatc
421 gccatcattc gctggccggg gtgacctttg tgagtagcca tgcggccttt aggatgtcca
481 gaaacttcac ggtggtgtgg ataatgtcct gcctgctggg cgtgatttcc tggggcgctt
541 cgccactgat gctgggcac cggatgctgc cgctccaatg ttggtatccc ttcgacgccc
601 tgggtcccgg cacatatacg gcggtctatg ctacacaact tttcggtcag atcatggtgg
661 gcatgacctt tggattcggg ggatcactgt ttgtcaccct gagcctgcta ctctgggac
721 aattcgatgt gctctactgc agcctgaaga acctggatgc ccataccaag ttgctgggag
781 gggagtctgt aaatggcctg agttcgctgc aagaggagt gctgctgggg gactcgaaga
841 ggggaattaaa tcagtacgtt ttgctccagg agcatccgac ggatctgctg agattgtcgg
901 caggacgaaa atgtcctgac caaggaaatg cgtttcacia cgcttgggtg gaatgcattc
961 gcttgcatcg cttcattctg cactgctcac aggagtggga gaatctattc agtccatatt
1021 gtctggtcaa gtcactgcag atcaccttcc agctttgcct gctgggtctt gtgggctgtt
1081 cgggtactcg agaggtcctg cggattgtca accagctaca gtacttggga ctgaccatct
1141 tcgagctcct aatgttcacc tattgtggcg aactcctcag tcggcatagt attcgatctg
1201 gcgacgcctt ttggaggggt gcgtgggtgga agcacgcccc tttcatccgc caggacatcc
1261 tcattcttct ggccaatagt agacgtgcag ttcacgtgac tgccggcaag ttttatgtga
1321 tggatgtgaa tcgtctaaga tcggttataa cgcaggcggt cagcttcttg actttgctgc
1381 aaaagttagc tgccaagaag acggaatcgg agctctaaac tgggtaccacg catcgatatt
1441 tatttagcgc attaaaaaaaa agtcgagtaa aagcaaaaaa aaaaaaaaaa aaa
```

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## FIG. 8C-1

DOR87 [AF127926]

LOCUS XXXXX 1556 bp mRNA INV 02-FEB-1999  
 DEFINITION Drosophila melanogaster odorant receptor DOR87 mRNA, complete cds.  
 ACCESSION AF127926  
 KEYWORDS .  
 SOURCE fruit fly.  
 ORGANISM Drosophila melanogaster  
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.  
 REFERENCE 1 (bases 1 to 1556)  
 AUTHORS Leslie B. Vosshall, Hubert Amrein, Pavel S. Morozov, Andrey Rzhetsky and Richard Axel.  
 TITLE A Spatial Map of Olfactory Receptor Expression in the Drosophila Antenna  
 JOURNAL Cell (1999) In press  
 REFERENCE 2 (bases 1 to 1556)  
 AUTHORS Vosshall, L.B., Amrein, H., Morozov, P.S., Rzhetsky, A. and Axel, R.  
 TITLE Direct Submission  
 JOURNAL Submitted (02-FEB-1999) Department of Biochemistry and Molecular Biophysics, HHMI-Columbia University, 701 West 168th Street, New York, NY 10032, USA  
 FEATURES Location/Qualifiers  
 Comment: /tissue='adult antenna'  
 /note='putative seven transmembrane G protein coupled receptor'  
 source 1..1556  
 /organism="Drosophila melanogaster"  
 /strain="Oregon R"  
 /db\_xref="taxon:7227"  
 /chromosome="II"  
 /map="43B1-2"  
 gene 1..1556  
 /note="odorant receptor"  
 /gene="DOR87"  
 CDS 30..1157  
 /gene="DOR87"  
 /note="odorant receptor"  
 /codon\_start=1  
 /product="DOR87"  
 /translation="MTIEDIGLVGINVRMWRHLAVLYPTPGSSWRKFAFVLPVTAMNL  
 MQFVYLLRMWGDLPAFILNMFFFSIAIFNALMRTWLVIKRRQFEFLGQLATLFHSIL  
 DSTDEWGRGILRRAEREARNLAILNLSASFLLDIVGALVSPLFREERAHPPFGVALPGVS  
 MTSSPVYEVIIYLAQLPTPLLLSMYMPFVSLFAGLAIFGKAMLOILVHRLGQIGGEEQ  
 SEERFORLASCIAHYHTQVMRYVWQLNKLVANIVAVEAIIFGSIICSLFLNIIITSP  
 TQVISIVMYILTMLYVLFYYNRANEICLENRVAEAVYNVPWYEAGTRFRKTLILFL  
 MQTQHPMEIRVGNVYPMTLAMEFQSLNASYSYFTMLRGVTGK"  
 BASE COUNT 329 a 413 c 408 g 406 t

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## FIG. 8C-2

ORIGIN

1 ggcaacgagggc ttatagaaaag tgcccgagcaa tgacaatcga ggatatcggc ctggtgggca  
61 tcaacgtgcg gatgtggcga cacttggccg tgctgtaccc cactccgggc tccagctggc  
121 gcaagttcgc cttcgtgctg ccggtgactg cgatgaatct gatgcagttc gtctacctgc  
181 tgcggatgtg gggcgacctg cccgccttca ttctgaacat gttcttcttc tcggccattt  
241 tcaacgcccc gatgcgacg tggctgggtca taatcaagcg gcgccagttc gaggagtctc  
301 tcggccaact ggccactctg ttccattcga ttctcgactc caccgacgag tgggggctg  
361 gcatcctgcg gagggcgga cgggaggctc ggaacctggc catccttaat ttgagtgcct  
421 ccttcctgga cattgtcggg gctctgggat cggcgctttt cagggaggag agagctcatc  
481 ccttcggcgt agctctacca ggagtgaagc tgaccagttc acccgctctac gaggttatct  
541 acttggccca actgcctacg cccctgctgc tgtccatgat gtacatgcct ttctgcagcc  
601 tttttgcccg cctggccatc tttgggaagg ccatgctgca gatcctggta cacaggctgg  
661 gccagattgg cggagaagag cagtcggagg aggagcgctt ccaaaggctg gcctcctgca  
721 ttgcgtacca cacgcagggt atgcgctatg tgtggcagct caacaaactg gtggccaaca  
781 ttgtggcggt ggaagcaatt atttttggct cgataatctg ctactgctc ttctgtctga  
841 atattataac ctacccacc caggatgatc cgatagtgat gtacattctg accatgctgt  
901 acgttctctt cacctactac aatcgggcca atgaaatag cctcgagaac aaccgggtgg  
961 cggaggctgt ttacaatgtg cccctggtacg aggcagggaac tcgggtttcgc aaaaccctcc  
1021 tgatcttctt gatgcaaaaca caacaccgga tggagataag agtcggcaac gtttacccca  
1081 tgacattggc catgttccag agtctgttga atgcgtccta ctctacttt accatgctgc  
1141 gtggcgtcac cggcaaatga gctgaaagac cgaaaaaacc ggagtatccc ctcccatat  
1201 cccctgctc ctttattttt ctttcccttt ccctttccgt tttcccatc gcttttccag  
1261 caatccgggt aatgcaaaaa gttgttgcgt gctgtgggtc tggctgcttg tttggcattt  
1321 gcatatgctt gtcgtttgaa aggatttaac cggactgctg gcacggagtc ggcattcctg  
1381 ctcttgatc ctggcatgca aatagttggc ttcttagatt gttacacaaa atagattgta  
1441 gattgcagct gaatgttgtg cttggaataa agtcaaaagg atgtggagtc ggcccaaggc  
1501 tctgcccatt ctggttgctc gggatgcccc aaagtatgaa aaaaaaaaaa aaaaaa

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## FIG. 8D-1

DOR53 [AF127923]

LOCUS XXXXX 1305 bp mRNA INV 06-FEB-1999  
 DEFINITION Drosophila melanogaster putative odorant receptor DOR53 mRNA.  
 complete cds.  
 ACCESSION AF127923  
 KEYWORDS .  
 SOURCE fruit fly.

ORGANISM Drosophila melanogaster  
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;  
 Pterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea;  
 Drosophilidae; Drosophila.  
 REFERENCE 1 (bases 1 to 1305)  
 AUTHORS Leslie B. Vosshall, Hubert Amrein, Pavel S. Morozov, Andrey  
 Rzhetsky and Richard Axel.  
 TITLE A Spatial Map of Olfactory Receptor Expression in the Drosophila  
 Antenna  
 JOURNAL Cell (1999) In press  
 REFERENCE 2 (bases 1 to 1305)  
 AUTHORS Vosshall, L.B., Amrein, H., Morozov, P.S., Rzhetsky, A. and Axel, R.  
 TITLE Direct Submission  
 JOURNAL Submitted (06-FEB-1999) Department of Biochemistry and Molecular  
 Biophysics, HHMI-Columbia University, 701 West 168th Street, New  
 York, NY 10032, USA

FEATURES Location/Qualifiers  
 source 1..1305  
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 /strain="Oregon R"  
 /db\_xref="taxon:7227"  
 /note="\_tissue\_type='adult antenna' \_note='putative seven  
 transmembrane G protein coupled receptor';"  
 /chromosome="II"  
 /map="22A2-3"  
 gene 1..1305  
 /note="odorant receptor"  
 /gene="DOR53"  
 CDS 79..1179  
 /gene="DOR53"  
 /note="odorant receptor"  
 /codon\_start=1  
 /product="DOR53"

/translation="MWSFGWTEPENKRWILPYKLWLAFVNIVMLILLPISISIEYLHR  
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 VHRVYVAMGNFFDILYHIFYSTFVVMNFPYFLLERRHAWRMYPYIDSDEQFYISSIAE  
 CFLMTEAIYMDLCTDVCPLISMLMARCHISLLKQRLRLNLSKPGRTEDLEYLEELTECI  
 RDHRLLLDYVDALRPVFSGTIFVQFLLIGTVLGLSMLNLMFFSTFWTGVATCLFMFDV  
 SMETFPFCYLCNMIIDDCQEMSNCFLQSDWTSADRRYKSTLVYFLHNLQQPITLTAGG  
 VFPISMQTNLAMVKLAFSVVTVIKQFNLAERFQ"  
 BASE COUNT 331 a 286 c 279 g 409 t



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## FIG. 8D-2

ORIGIN

```
1  ttttttcccc acataaaaaga aaagccattg agcgagcggg ttaagtcccc agatgccttc
61 atttacttgg atcgggtgat gtggtccttt ggctggacag agcctgaaaa caaaagggtg
121 atccttcctt ataaactgtg gttagcgttc gtgaacatag taatgctcat ccttctgccg
181 atctcgataa gcaccgagta cctccaccga tttaaaacct tctcggcggg ggagttcctt
241 agttccctcg agattggagt caacatgtac ggaagctctt ttaagtgcgc cttcaccttg
301 attggattca agaaaagaca ggaagctaag gttttactgg atcagctgga caagagatgc
361 cttagcgata aggagagggt cactgttcat cgctatgtcg ccatgggaaa ctttttcgat
421 attttgtatc acatttttta ctccaccttc gtggtaatga acttcccgtt ttttctgctt
481 gagagacgcc atgcttggcg catgtacttt ccatatatcg attccgacga acagttttac
541 atctccagca tcgccgagtg ttttctgatg acggaggcca tctacatgga tctctgtacg
601 gacgtgtgtc ccttgatctc catgcttatg gctcgatgcc acatcagcct cctgaaacag
661 cgactgagaa atctccgatc gaagccagga aggaccgaag atgagtactt ggaggagctc
721 accgagtgca ttcgggatca tcgattgcta ttggactatg ttgacgcatt gcgacccgtc
781 ttttcgggaa ccatttttgt gcagttcctc ctgatcggta ctgtactggg tctctcaatg
841 ataaatctaa tgttcttctc gacatttttg actggtgtcg ccacttgctt ttttatgttc
901 gacgtgtcca tggagacgtt ccccttttgc tatttgtgca acatgattat cgatgactgc
961 caggaaatgt ccaattgcct ctttcaatcg gactggacct ctgccgatcg tcgctacaaa
1021 tccactttgg tatactttct tcacaatctt cagcaacca ttactctcac ggctgggtgga
1081 gtgtttccta tttccatgca aacaaatttg gctatggtga agctggcatt ttctgtggtt
1141 acggtaatta agcaatttaa cttggccgaa aggtttcaat aagttgagag ggacgagctc
1201 tgctactatt atattatata ttatattata ttatatatat attattttat attatatatt
1261 gctgtaccct aataaatatt tagtaataaa aaaaaaaaaa aaaaaa
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## FIG. 8E-1

DOR67 [AF127924]

LOCUS XXXXX 1321 bp mRNA INV 06-FEB-1999  
 DEFINITION Drosophila melanogaster putative odorant receptor DOR67 mRNA, complete cds.  
 ACCESSION AF127924  
 KEYWORDS .  
 SOURCE fruit fly.  
 ORGANISM Drosophila melanogaster  
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

REFERENCE 1 (bases 1 to 1321)  
 AUTHORS Leslie B. Vosshall, Hubert Amrein, Pavel S. Morozov, Andrey Rzhetsky and Richard Axel.  
 TITLE A Spatial Map of Olfactory Receptor Expression in the Drosophila Antenna  
 JOURNAL Cell (1999) In press  
 REFERENCE 2 (bases 1 to 1321)  
 AUTHORS Vosshall, L.B., Amrein, H., Morozov, P.S., Rzhetsky, A. and Axel, R.  
 TITLE Direct Submission  
 JOURNAL Submitted (06-FEB-1999) Department of Biochemistry and Molecular Biophysics, HHMI-Columbia University, 701 West 168th Street, New York, NY 10032, USA

FEATURES Location/Qualifiers  
 Comment: /tissue\_type='adult antenna'  
 /note='putative seven transmembrane G protein coupled receptor'  
 source 1..1321  
 /organism="Drosophila melanogaster"  
 /strain="Oregon R"  
 /db\_xref="taxon:7227"  
 /chromosome="II"  
 /map="22A3"  
 gene 1..1321  
 /note="odorant receptor"  
 /gene="DOR67"  
 CDS 102..1202  
 /gene="DOR67"  
 /note="odorant receptor"  
 /codon\_start=1  
 /product="DOR67"

/translation="MWSFGWTVPENKRWDLHYKLWSTFVTLVIFILLPISVSVEYIQR  
 FKTFSSAGEFLSSIQIGVNMYGSSFKSYLTMMGYKKRQEAKMSLDELDKRCVCDEERTI  
 VHRHVALGNFCYIFYHIAYTSFLISNFLSFIMKRIHAWRMYPYVDPEKQFYISSIAE  
 VILRGWAVFMDLCTDVCPLISMVIARCHITLLKQRLNLRSEPGRTEDAYLKELADCV  
 RDHRLILDYVDALRSVFSGTIFVQFLIGIVLGLSMINIMFFSTLSTGVAVVLFMSCV  
 SMQTFFPCYLCNMIMDDCQEMADSLFQSDWTSADRRYKSTLVYFLHNLQQPIILTAGG  
 VFPISMQTNLNMVKLAFTVVTIVKQFNLAKEFQ"  
 BASE COUNT 348 a 281 c 294 g 398 t

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## FIG. 8E-2

ORIGIN

1 ggcacgagga aatgttaagc cagttctttc cccacattaa agaaaagcca ttgagcgagc  
61 gggttaagtc ccgagatgcc ttcgtttact tagatcgggt gatgtgggtcc tttggctgga  
121 cagtgcctga aaacaaaagg tgggatctac attacaaact gtggccaact ttcgtgacat  
181 tggatgatatt tatccttctg ccgatatcgg taagcgttga gtatattcag cggttcaaga  
241 ccttctcggc gggtagtatt cttagctcaa tccagattgg cgtaacatg tacggaagca  
301 gctttaaaag ttatttgacc atgatgggat ataagaagag acaggaggct aagatgtcac  
361 tggatgagct ggacaagaga tgcgtttgtg atgaggagag gaccattgta catcgacatg  
421 tcgccctggg aaacttttgc tatattttct atcacattgc gtacactagc tttttgatct  
481 caaacttttt gtcattttata atgaagagaa tccatgcctg gcgcatgtac tttccctacg  
541 tcgaccccca aaagcaattt tacatctcta gcatcgccga agtcattctt aggggggtggg  
601 ccgtcttcat ggatctctgc acggatgtgt gtcttttgat ctccatggta atagcacgat  
661 gccacatcac ccttctgaaa cagcgcttgc gaaatctacg atcggaacca ggaaggacgg  
721 aagatgagta cttgaaggag ctgcgcgact gcgttcgaga tcaccgcttg atattggact  
781 atgtcgacgc attgcgatcc gtcttttcgg ggacaatttt tgtgcagttc ctcttgatcg  
841 gtattgtact gggctctgtca atgataaata taatgttttt ctcaacactt tcgactgggtg  
901 tcgccgttgt cctttttatg tcctgogtat ctatgcagac gttccccctt tgctatttct  
961 gtaacatgat tatggatgac tgccaagaga tggccgactc cctttttcaa tcggactgga  
1021 catctgccga tcgtcgctac aaatccactt tggatactt tcttcacaa cttcagcagc  
1081 ccattattct tacggctggg ggagtctttc ctatttccat gcaaacaaat ttaaataatg  
1141 tgaagctggc ctttactgtg gttacaatag tgaacaatt taacttggca gaaaagtctc  
1201 aataagttaa gatatgcaag ctctgctatt ataaacctac actcgagaaa acatttcttc  
1261 acattaataa accttcagta cttactgctt gtggcgcccc cggaaaaaaa aaaaaaaaaa  
1321 a

FOR "FIG. 8E-2"

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## FIG. 8F-1

DOR64 [AF127925]

LOCUS XXXXX 1308 bp mRNA INV 06-FEB-1999  
DEFINITION Drosophila melanogaster putative odorant receptor DOR64 mRNA,  
complete cds.  
ACCESSION AF127925  
KEYWORDS .  
SOURCE fruit fly.  
ORGANISM Drosophila melanogaster  
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;  
Pterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea;  
Drosophilidae; Drosophila.  
REFERENCE 1 (bases 1 to 1308)  
AUTHORS Leslie B. Vosshall, Hubert Amrein, Pavel S. Morozov, Andrey  
Rzhetsky and Richard Axel.  
TITLE A Spatial Map of Olfactory Receptor Expression in the Drosophila  
Antenna  
JOURNAL Cell (1999) In press  
REFERENCE 2 (bases 1 to 1308)  
AUTHORS Vosshall, L.B., Amrein, H., Morozov, P.S., Rzhetsky, A. and Axel, R.  
TITLE Direct Submission  
JOURNAL Submitted (06-FEB-1999) Department of Biochemistry and Molecular  
Biophysics, HHMI-Columbia University, 701 West 168th Street, New  
York, NY 10032, USA  
FEATURES Location/Qualifiers  
Comment: /tissue\_type='adult antenna'  
/note='putative seven transmembrane G protein coupled  
receptor'  
source 1..1308  
/organism='Drosophila melanogaster'  
/strain='Oregon R'  
/db\_xref='taxon:7227'  
/chromosome='II'  
/map='23A1-2'  
gene 1..1308  
/note='odorant receptor'  
/gene='DOR64'  
CDS 22..1158  
/gene='DOR64'  
/note='odorant receptor'  
/codon\_start=1  
/product='DOR64'  
/translation='MKLSETLKIDYFRVQLNAWRICGALDLSEGRYWSWSMLLCILVY  
LPTPMLLRGVYSFEDPVENNFSLSLTVTSLSNLMKFCMYVAQLTKMVEVQSLIGQLDA  
RVSGESQSERHRNMTEHLLRMSKLFQITYAVVFIIAAVPFVFE TELSLPMPMWF PFDW  
KNSMVA YIGALVFQEIGYVFQIMQCFADSF PPLVLYLISEQCQLLILRISEIGYGYK  
TLEENEQDLVNCIRDQNALYRLLDVTKSLVSYPMVQFMVIGINIAITLFLVIFYVET  
LYDRIYYLCFLLGITVQTYPLCYGTMTVQESFAELHYAVFCSNWDQASASYRGHMLIL  
AERTKRMQLLAGNLVPIHLSTYVACWKGAYSFFTLMADRDGLGS'  
BASE COUNT 331 a 314 c 305 g 358 t

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## FIG. 8F-2

ORIGIN

1 ggcacgagcc aagaattcaa aatgaaactc agcgaaaccc taaaaatcga ctattttcga  
61 gtccagttga atgcctggcg aattttgtgg gccttggatc tcagcgaggg taggtactgg  
121 agttggtcga tgctattgtg catcttgggtg tacctgccga caccatgct actgagagga  
181 gtatacagtt tcgaggatcc ggtggaaaat aatttcagct tgagcctgac ggtcacatcg  
241 ctgtccaatc tcatgaagtt ctgcatgtac gtggcccaac taacaaagat ggtcgaggtc  
301 cagagtctta ttggtcagct ggatgcccgg gttttctggc agagccagtc tgagcgtcat  
361 agaaatatga ccgagcacct gctaaggatg tccaagctgt tccagatcac ctacgctgta  
421 gtcttcatca ttgctgcagt tcccttcggt ttcgaaactg agctaagctt acccatgccc  
481 atgtgggttc ctttcgactg gaagaactcg atggtggcct acatcggagc tctggttttc  
541 caggagattg gctatgtctt tcaaattatg caatgctttg cagctgactc gtttcccccg  
601 ctcgactgtt acctgatctc cgagcaatgt caattgctga tcctgagaat ctctgaaatc  
661 ggatatgggt acaagactct ggaggagaac gaacaggatc tgggtcaactg catcagggat  
721 caaaacgcgc tgtatagatt actcgatgtg accaagagtc tcgtttcgta tcccatgatg  
781 gtgcagttta tggttattgg catcaacatc gccatcacc tatttgcctt gatattttac  
841 gtggagacct tgtacgatcg catctattat ctttgctttc tcttgggcat caccgtgcag  
901 acatatccat tgtgtacta tggaaccatg gtgcaggaga gttttgctga gtttcactat  
961 gcggtattct gcagcaactg ggtggatcaa agtgccagct atcgtgggca catgctcatc  
1021 ctggcgagc gcactaagcg gatgcagctt ctcttcgccc gcaacctggg gcccatccac  
1081 ctgagcacct acgtggcctg ttggaagggg gcctactcct tcttcacct gatggccgat  
1141 cgagatggcc tgggttctta gtagcccagt catttcactc acattctaca tcaagtagta  
1201 ctaccactga acacgaacac gaatatttca aaagtaaaaca cataatattc acaatagtgt  
1261 atcactttta taaaattttt ggttaccatg aaaaaaaaaa aaaaaaaaaa

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## FIG. 8G-1

DOR71g

LOCUS XXXXX 1252 bp DNA INV 07-FEB-1999  
 DEFINITION *Drosophila melanogaster* odorant receptor DOR71g, GENSCAN  
 predicted complete cds.  
 ACCESSION :  
 KEYWORDS :  
 SOURCE fruit fly.  
 ORGANISM *Drosophila melanogaster*  
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;  
 Pterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea;  
 Drosophilidae; *Drosophila*.

REFERENCE 1 (bases 1 to 1252)  
 AUTHORS Leslie B. Vosshall, Hubert Amrein, Pavel S. Morozov, Andrey  
 Rzhetsky and Richard Axel.  
 TITLE A Spatial Map of Olfactory Receptor Expression in the *Drosophila*  
 Antenna  
 JOURNAL Cell (1999) In press  
 REFERENCE 2 (bases 1 to 1252)  
 AUTHORS Celniker, S.E., Agbayani, A., Arcaina, T.T., Baxter, E., Blazej, R.G.,  
 Butenhoff, C., Champe, M., Chavez, C., Chew, M., Ciesiolka, L.,  
 Doyle, C.M., Farfan, D.E., Galle, R., George, R.A., Harris, N.L.,  
 Hoskins, R.A., Houston, K.A., Hummasti, S.R., Karra, K., Kearney, L.,  
 Kim, E., Lee, B., Lewis, S., Li, P., Lomotan, M.A., Mazda, P.,  
 Moshrefi, A.R., Moshrefi, M., Nixon, K., Pacleb, J.M., Park, S.,  
 Pfeiffer, B., Poon, L., Punch, E., Sequeira, A., Sethi, H., Snir, E.,  
 Svirskas, R.R., Twomey, B., Wan, K.H., Weinburg, T., Zhang, R.,  
 Zieran, L.L. and Rubin, G.M.  
 TITLE Sequencing of *Drosophila melanogaster*  
 JOURNAL Unpublished  
 REFERENCE 3 (bases 1 to 1252)  
 AUTHORS Vosshall, L.B., Amrein, H., Morozov, P.S., Rzhetsky, A. and Axel, R.  
 TITLE Direct Submission  
 JOURNAL Submitted (07-FEB-1999) Department of Biochemistry and Molecular  
 Biophysics, HHMI-Columbia University, 701 West 168th Street, New  
 York, NY 10032, USA

FEATURES Location/Qualifiers  
 Comment: /tissue\_type='adult maxillary palp'  
 /note='putative seven transmembrane G protein coupled  
 receptor'  
 /note='sequence annotation for BDGP P1 clone DS07071;  
 predicted using GENSCAN; join (26150-24899)'  
 source 1..1252  
 /organism="*Drosophila melanogaster*"  
 /db\_xref="taxon:7227"  
 /chromosome="II"  
 /map="33B1-2"  
 exon 1..731  
 /gene="DOR71g"  
 /note="exon"  
 mRNA join(1..731,811..1234)  
 /gene="DOR71g"  
 CDS join(1..731,811..1234)  
 /gene="DOR71g"  
 /note="odorant receptor"  
 /codon\_start=1  
 /product="DOR71g"

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FIG. 8G-2

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/translation="MVIIDSLSFYRPFWICMRLLVPTFFKDSSRPVQLYVLLHILVT
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TFIASEQEHRYRDRHVHCHARRFTRCLYISFGMIYALFLGVFVQVISGNWELLYPAY
FPFDLESNRFLGAVALGYQVFSMLVEGFQGLGNDTYTPTLCLLAGHVHLWSIRMGQL
GYFDDDETVDVNHQRLLDYIEQHKLLVRFHNLVSRITISEVQLVQLGGCGATLCIIVSYML
FFVGDTISLVYYLVFFGVVVCVQLFPSCYFASEVAEELERLPYAIFSSRWYDQSRDHRF
DLLIFTQLTLGNRGWIIKAGGLIELNLNAFFATLKMAYSLFAVVVRAGKI"

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gene 1..1234
      /note="odorant receptor"
      /gene="DOR71g"
intron 732..810
      /gene="DOR71g"
      /note="intron"
exon 811..1231
      /gene="DOR71g"
      /note="exon"
polyA_signal 1246..1252
      /note="polyA_signal"
BASE COUNT 269 a 299 c 305 g 379 t
ORIGIN

```

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1 atgggtcatta tgcacagtct tagtttttat cgtccattct ggatctgcat gcgattgctg
61 gtaccgactt tcttcaagga ttcctacgt cctgtccagc tgtacgtggt gttgctgcac
121 atcctgggtc ccttgtggtt tccactgcat ctgctgctgc atcttctgct acttccatct
181 accgctgagt tctttaagaa cctgacctg tctctgactt gtgtggcctg cagctctgaag
241 catgtggccc acttgatatca cttgccgcag attgtggaaa tcgaatcact gatcgagcaa
301 ttagacacat ttattgccag cgaacaggag catcgttact atcgggatca cgtacattgc
361 catgctaggg gctttacaag atgtctctat attagctttg gcatgatcta tgcgcttttc
421 ctgttcggcg tcttcgttca ggttatttagc ggaaattggg aacttctcta tccagcctat
481 ttcccattcg acttgagagag caatcgcttt ctgggcgcag tagccttggg ctatcaggta
541 ttcagcatgt tagttgaagg cttccagggg ctgggcaacg atacctatac cccactgacc
601 ctatgccttc tggccggaca tgtccatttg tggccatac gaatgggtca actgggatac
661 ttcgatgacg agacgggtgt gaatcatcag cgtttgctgg attacattga gcagcataaa
721 ctcttggtgc ggtaagcttt gattaactaa cttttgacaa gaagtattat cactttaact
781 gggtccaaaa acgatgcact caatgtgcag attccacaac ctggtgagcc ggaccatcag
841 cgaagtgcaa ctggtgcagc tgggcgggatg tggagccact ctgtgcatca ttgtctccta
901 catgctcttc tttgtgggcy acacaatctc gctgggtctac tacttggtgt tctttggagt
961 ggtctgcgtg cagctctttc ccagctgcta ttttgccagc gaagtggccg aggatgtgga
1021 acggctgcca tatgcgatct tctccagcag atggtacgat caatcgcggt atcatcgatt
1081 cgatttgctc atctttacac aattaacact gggaaaccgg ggggtggatca tcaaggcagg
1141 aggtcttata gagctgaatt tgaatgcctt tttcgccacc ctgaagatgg cctattccct
1201 ttttgcagtt gtgggtgcggg caaagggtat atagagagtc tgtttaatta aa

```

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**FIG. 8H-1**

DOR72g

LOCUS XXXXX 1321 bp DNA INV 08-FEB-1999  
 DEFINITION Drosophila melanogaster odorant receptor DOR72g, GENSCAN  
 predicted complete cds.  
 ACCESSION ;  
 KEYWORDS .  
 SOURCE fruit fly.  
 ORGANISM Drosophila melanogaster  
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;  
 Pterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea;  
 Drosophilidae; Drosophila.  
 REFERENCE 1 (bases 1 to 1321)  
 AUTHORS Leslie B. Vosshall, Hubert Amrein, Pavel S. Morozov, Andrey  
 Rzhetsky and Richard Axel.  
 TITLE A Spatial Map of Olfactory Receptor Expression in the Drosophila  
 Antenna  
 JOURNAL Cell (1999) In press  
 REFERENCE 2 (bases 1 to 1321)  
 AUTHORS Celniker, S.E., Agbayani, A., Arcaina, T.T., Baxter, E., Blazej, R.G.,  
 Butenhoff, C., Champe, M., Chavez, C., Chew, M., Ciesiolka, L.,  
 Doyle, C.M., Farfan, D.E., Galle, R., George, R.A., Harris, N.L.,  
 Hoskins, R.A., Houston, K.A., Hummasti, S.R., Karra, K., Kearney, L.,  
 Kim, E., Lee, B., Lewis, S., Li, P., Lomotan, M.A., Mazda, P.,  
 Moshrefi, A.R., Moshrefi, M., Nixon, K., Pacleb, J.M., Park, S.,  
 Pfeiffer, B., Poon, L., Punch, E., Sequeira, A., Sethi, H., Snir, E.,  
 Svirskas, R.R., Twomey, B., Wan, K.H., Weinburg, T., Zhang, R.,  
 Zieran, L.L. and Rubin, G.M.  
 TITLE Sequencing of Drosophila melanogaster  
 JOURNAL Unpublished  
 REFERENCE 3 (bases 1 to 1321)  
 AUTHORS Vosshall, L.B., Amrein, H., Morozov, P.S., Rzhetsky, A. and Axel, R.  
 TITLE Direct Submission  
 JOURNAL Submitted (08-FEB-1999) Department of Biochemistry and Molecular  
 Biophysics, HHMI-Columbia University, 701 West 168th Street, New  
 York, NY 10032, USA  
 FEATURES Location/Qualifiers  
 Comment: /tissue\_type='adult antenna'  
 /note='putative seven transmembrane G protein coupled  
 receptor'  
 /note='sequence annotation for BDGP P1 clone DS07071;  
 predicted using GENSCAN; join (27938-26618)'  
 source 1..1321  
 /organism="Drosophila melanogaster"  
 /db\_xref="taxon:7227"  
 /chromosome="II"  
 /map="33B1-2"  
 mRNA join(1..728,910..1321)  
 /gene="DOR72g"  
 gene 1..1321  
 /note="odorant receptor"  
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 exon 1..728  
 /gene="DOR72g"  
 /note="exon"  
 CDS join(1..728,910..1321)  
 /gene="DOR72g"  
 /note="odorant receptor"  
 /codon\_start=1  
 /product="DOR72g"

0093222660



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intron      729..909
            /gene="DOR72g"
            /note="intron"
exon        910..1321
            /gene="DOR72g"
            /note="exon"

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1	atggacttaa	aaccgcgagt	cattcgaagt	gaagatatct	acagaacctt	tgggttatat
61	tggcatcttt	tgggcctgga	aagcaatttc	tttctgaatc	gcttggttga	tttgggtgatt
121	acaatttttcg	taaccatttg	gtatccaatt	cacctgattc	tgggactggt	tatggaaaga
181	tctttggggg	atgtctgcaa	gggtctacca	attacggcag	catgcttttt	cgccagcttt
241	aaattttattt	gttttcgctt	caagctatct	gaaattaaag	aaatcgaaat	attattttaa
301	gagctggatc	agcgagcttt	aagtcgagag	gaatgcgagt	ttttcaatca	aaatcacgaga
361	cgtgaggcga	atttcatttg	gaaaaagtttc	atttgggctc	atggactgtc	gaatatcttcg
421	gctattgcat	cagttctttt	cggcggttga	cataagctat	tatatccgc	ctgggttcca
481	tacgatgtgc	aggccacgga	actaatattt	tggctaagt	taacatacca	aattgcccga
541	gtaagtttgg	ccatacttca	gaatttggcc	aatgattcct	atccaccgat	gacatttttg
601	gtggttgccg	gtcatgtaag	acttttggcg	atgcgcttga	gtagaattgg	ccaaggtcca
661	gaggaaacaa	tatacttaac	cggaaagcaa	ttaatcgaaa	gcacgagga	tcaccgaaaa
721	ctaatagaagt	aatgtacata	tatagaatgg	tttttagtta	ttatcattaa	atgaacgtgt
781	tgtaggaaaa	ccattcttgt	tgtcgggtgt	cacggaaatc	gattttcctt	aatttacata
841	tgatattaaa	tacttcttgt	caaacaatta	tcatattagt	aaattagaat	ctttattatt
901	tattttccaga	tactgtggaat	tactgcgcag	caccatgaat	atttcgcagc	tcggccagtt
961	tattttcaagt	ggtgttaata	ttttccataac	actagtcaac	attctcttct	ttgcgataa
1021	caatttcgct	ataacctact	acggagtgt	cttcctatcg	atggtgttgg	aattattccc
1081	gtgctgctat	tacggcaccc	tgatatccgt	ggagatgaac	cagctgacct	atgcgattta
1141	ctcaagtaac	tggatgagta	tgaatcggag	ctacagccgc	atcctactga	tcttcatgca
1201	actcaccttg	gcggaagtgc	agatcaaggc	cgggtgggatg	attggcatcg	gaatgaacgc
1261	ctcttttgcc	accgtgcgat	tggcctactc	cttcttcact	ttggccatgt	cgctgcgtta
1321	a					

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## FIG. 8I-1

DOR73g

LOCUS XXXXX 1212 bp DNA INV 08-FEB-1999  
 DEFINITION Drosophila melanogaster odorant receptor DOR73g, GENSCAN  
 predicted complete cds.  
 ACCESSION ;  
 KEYWORDS .  
 SOURCE fruit fly.  
 ORGANISM Drosophila melanogaster  
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;  
 Pterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea;  
 Drosophilidae; Drosophila.  
 REFERENCE 1 (bases 1 to 1212)  
 AUTHORS Leslie B. Vosshall, Hubert Amrein, Pavel S. Morozov, Andrey  
 Rzhetsky and Richard Axel.  
 TITLE A Spatial Map of Olfactory Receptor Expression in the Drosophila  
 Antenna  
 JOURNAL Cell (1999) In press  
 REFERENCE 2 (bases 1 to 1212)  
 AUTHORS Celniker, S.E., Agbayani, A., Arcaina, T.T., Baxter, E., Blazej, R.G.,  
 Butenhoff, C., Champe, M., Chavez, C., Chew, M., Ciesiolka, L.,  
 Doyle, C.M., Farfan, D.E., Galle, R., George, R.A., Harris, N.L.,  
 Hoskins, R.A., Houston, K.A., Hummasti, S.R., Karra, K., Kearney, L.,  
 Kim, E., Lee, B., Lewis, S., Li, P., Lomotan, M.A., Mazda, P.,  
 Moshrefi, A.R., Moshrefi, M., Nixon, K., Pacleb, J.M., Park, S.,  
 Pfeiffer, B., Poon, L., Punch, E., Sequeira, A., Sethi, H., Snir, E.,  
 Svirska, R.R., Twomey, B., Wan, K.H., Weinburg, T., Zhang, R.,  
 Zieran, L.L. and Rubin, G.M.  
 TITLE Sequencing of Drosophila melanogaster  
 JOURNAL Unpublished  
 REFERENCE 3 (bases 1 to 1212)  
 AUTHORS Vosshall, L.B., Amrein, H., Morozov, P.S., Rzhetsky, A. and Axel, R.  
 TITLE Direct Submission  
 JOURNAL Submitted (08-FEB-1999) Department of Biochemistry and Molecular  
 Biophysics, HHMI-Columbia University, 701 West 168th Street, New  
 York, NY 10032, USA

FEATURES Location/Qualifiers  
 Comment: /tissue\_type='adult antenna'  
 /note='putative seven transmembrane G protein coupled  
 receptor'  
 /note='sequence annotation for BDGP P1 clone DS07071;  
 predicted using GENSCAN; join (29614-28403)'  
 source 1..1212  
 /organism="Drosophila melanogaster"  
 /db\_xref="taxon:7227"  
 /chromosome="II"  
 /map="33B1-2"  
 mRNA join(1..722,798..1212)  
 /gene="DOR73g"  
 gene 1..1212  
 /note="odorant receptor"  
 /gene="DOR73g"  
 exon 1..722  
 /gene="DOR73g"  
 /note="exon"  
 CDS join(1..722,798..1212)  
 /gene="DOR73g"  
 /note="odorant receptor"  
 /codon\_start=1  
 /product="DOR73g"

10/2/99 10:00 AM

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FIG. 81-2

translation="MDSRRKVRSENLYKTYWLYWRLLGVEGDYPFRRLVDFTITSFIT  
ILFPVHLILGMYKKPQIQVFRSLHFTSECLFCSYKFFCFRWKLKEIKTIEGLLDLDS  
RVESEEEERNYFNQNPSPRVARMLSKSYLVAAISAIITATVAGLFSTGRNLMYLGWFPYD  
FQATAAIYWISFSYQAIGSSLLILENLANDSYPPITFCVVSGHVRLIMRLSRIGHDV  
KLSSSENTKRKLEIGIQDHRKLMKIIIRLLRSTLHLSQLGQFLSSGINISITLINILFFA  
ENNFMALYYAVFFAAMLIELFPSCYYGILMTMEFDKLPYAIFSSNWLKMDKRYNRSLI  
ILMQLTLVPVNIKAGGIVGIDMSAFFATVRMAYSFYTLALSFRV"

intron 723..797  
/gene="DOR73g"  
/note="intron"  
exon 798..1212  
/gene="DOR73g"  
/note="exon"

BASE COUNT 352 a 231 c 242 g 387 t  
ORIGIN

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1 atggattcaa gaaggaaagt ccgaagtga aatctttaca aaacctattg gctttactgg
61 cgacttctgg gagtcgaggg cgattatcct ttctcgacggc tagtgggattt tacaatcacg
121 tctttcatta cgattttatt tcccgtgcat cttatactgg gaatgtataa aaagccccag
181 attcaagtct tcaggagtc gcatttcaca tcggaatgcc tttctgcag ctataagttt
241 ttctgttttc gttggaaact taaagaaata aagaccatcg aaggattgct ccaggatctc
301 gatagtcgag ttgaaagtga agaagaacgc aactacttta atcaaaatcc aagtcgtgtg
361 gctcgaatgc ttctgaaaag ttacttggtg gctgctatat cggccataat cactgcaact
421 gtagctgggt tatttagtac tggtcgaaat ttaatgtatc tgggttggtt tccctacgat
481 tttcaagcaa ccgcccgaat ctattggatt agtttttctt atcaggcgat tggctctagt
541 ctggtgatcc tggaaaatct ggccaacgat tcatatccgc cgattacatt ttgtgtggtc
601 tctggacatg tgagactatt gataatgcgt ttaagtcgaa ttggtcacga tgtaaaatta
661 tcaagttcgg aaaataccag aaaactcatc gaaggatatc aggatcacag gaaactaatg
721 aagtaagaat aaagatttaa gaaccgcgat ttgatagct cagagaactg ataattaatc
781 aaatgtaact tttccaggat aatacgccta cttcgcagca ctttacatct tagccaactg
841 ggccagttcc tttctagtgg aatcaacatt tccataacac tcatcaacat cctgttcttt
901 gcggaaaaca actttgcaat gctttattat gcggtgttct ttgctgcaat gttaatagaa
961 ctattttcaa gttgttacta tggaattctg atgacaatgg agtttgataa gctaccatat
1021 gccatcttct ccagcaactg gcttaaaatg gataaaaagat acaatcgatc cttgataatt
1081 ctgatgcaac taacactggg tccagtgaat ataaaagcag gtggtattgt tggcatcgat
1141 atgagtgcac tttttgccac agttcggatg gcataattcct tttacacttt agccttgcga
1201 tttcgagtat ag

```

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## FIG. 8J-1

DOR46

LOCUS XXXXX 1198 bp DNA INV 08-FEB-1999  
 DEFINITION *Drosophila melanogaster* odorant receptor DOR46g, GENSCAN  
 predicted complete cds.  
 ACCESSION ;  
 KEYWORDS .  
 SOURCE fruit fly.  
 ORGANISM *Drosophila melanogaster*  
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;  
 Pterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea;  
 Drosophilidae; *Drosophila*.  
 REFERENCE 1 (bases 1 to 1198)  
 AUTHORS Leslie B. Vosshall, Hubert Amrein, Pavel S. Morozov, Andrey  
 Rzhetsky and Richard Axel.  
 TITLE A Spatial Map of Olfactory Receptor Expression in the *Drosophila*  
 Antenna  
 JOURNAL Cell (1999) In press  
 REFERENCE 2 (bases 1 to 1198)  
 AUTHORS Celniker, S.E., Agbayani, A., Arcaina, T.T., Baxter, E., Blazej, R.G.,  
 Butenhoff, C., Champe, M., Chavez, C., Chew, M., Ciesiolka, L.,  
 Doyle, C.M., Farfan, D.E., Galle, R., George, R.A., Harris, N.L.,  
 Hoskins, R.A., Houston, K.A., Hummasti, S.R., Karra, K., Kearney, L.,  
 Kim, E., Lee, B., Lewis, S., Li, P., Lomotan, M.A., Mazda, P.,  
 Moshrefi, A.R., Moshrefi, M., Nixon, K., Pacleb, J.M., Park, S.,  
 Pfeiffer, B., Poon, L., Punch, E., Sequeira, A., Sethi, H., Snir, E.,  
 Svirskas, R.R., Twomey, B., Wan, K.H., Weinburg, T., Zhang, R.,  
 Zieran, L.L. and Rubin, G.M.  
 TITLE Sequencing of *Drosophila melanogaster*  
 JOURNAL Unpublished  
 REFERENCE 3 (bases 1 to 1198)  
 AUTHORS Vosshall, L.B., Amrein, H., Morozov, P.S., Rzhetsky, A. and Axel, R.  
 TITLE Direct Submission  
 JOURNAL Submitted (08-FEB-1999) Department of Biochemistry and Molecular  
 Biophysics, HHMI-Columbia University, 701 West 168th Street, New  
 York, NY 10032, USA  
 FEATURES Location/Qualifiers  
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 /note='sequence annotation for BDGP P1 clone DS07462;  
 predicted using GENSCAN'  
 source 1..1198  
 /organism="*Drosophila melanogaster*"  
 /db\_xref="taxon:7227"  
 /chromosome="II"  
 /map="59D5-7"  
 mRNA join(1..725,784..1198)  
 /gene="DOR46g"  
 gene 1..1198  
 /note="odorant receptor"  
 /gene="DOR46g"  
 exon 1..725  
 /gene="DOR46g"  
 CDS join(1..725,784..1198)  
 /gene="DOR46g"  
 /note="odorant receptor"  
 /codon\_start=1  
 /product="DOR46g"

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## FIG. 8J-2

/translation="MAEVRVDSLEFFKSHWTAWRYLGVAHFRVENWKNLYVFYSIVSN  
 LLVTLCYPVHLGISLFRNRTITEDIILNLTTFATCTACSVKCLLYAYNIKDVLEMERLL  
 RLLDERVVGPEQRSIYGQVRVQLRNVLYVFIGIYMPICALFAELSLFKEERGLMYPAW  
 FPFDWLHSTRNYIYANAYQIVGISFQLLQNYVSDCFPAVLCLISSHIKMLYNRFEEV  
 GLDPARDAEKDLEACITDHKHILELFRRIEAFISLPMLIQFTVTALNVCIGLAALVFF  
 VSEPMARMYFIFYSLAMPLQIFPSCFFGTDNEYWFGRLHYAAFSCNWHQTQNRSFKRKM  
 MLFVEQSLKKSTAVAGGMMRIHLDTFFSTLKGAYSLFTIIIRMRK"

intron 726..783  
 /gene="DOR46g"  
 exon 784..1198  
 /gene="DOR46g"

BASE COUNT 251 a 325 c 310 g 312 t  
 ORIGIN

1 atggcagagg tcagagtggg cagtctggag tttttcaaga gccattggac cgcctggcgg  
 61 tacttgggag tggctcattt tcgggtcgag aactggaaga acctttacgt gttttacagc  
 121 atttgtgtcg atctttctcgt gaccctgtgc taccctggtc acctgggaat atccctcttt  
 181 cgcaaccgca ccatcaccga ggacatcctc aacctgacca cctttgcgac ctgcacagcc  
 241 tgttcgggtga agtgcttgcg ctacgcctac aacatcaagg atgtgctgga gatggagcgg  
 301 ctgttgaggc ttttggtatga acgcgtcgtg ggtccggagc aacgcagcat ctacggacaa  
 361 gtgagggtcc agctgcgaaa tgtgctatac gtgttcatcg gcatctacat gccgtgtgcc  
 421 ctgttcgccc agctatcctt tctgttcaag gaggagcgcg gtctgatgta tcccgccttg  
 481 tttcccttcg actggctgca ctccaccagg aactattaca tagcgaacgc ctatcagata  
 541 gtgggcatct cgtttcagct gctgcaaaac tatgttagcg actgctttcc ggcggtggtg  
 601 ctgtgcctga tctcatccca catcaaaatg ttgtacaaca gattcgagga ggtgggcctg  
 661 gatccagcca gagatgcgga gaaggacctg gaggcctgca tcaccgatca caagcatatt  
 721 ctagagtggg caggcggctc attgtaacgt tcgtgttcta ttcactttcc aacttttttc  
 781 cagactattc cgacgcacatc aggccttcat ttccctgccc atgctaattc agttcacagt  
 841 gaccgccttg aatgtgtgca tcgggttagc agccctggtg tttttcgtca gcgagcccat  
 901 ggacaggatg tacttcatct tctactccct ggccatgccg ctgcagatct ttccgtcctg  
 961 ctttttcggc accgacaacg agtactggtt cggacgcctc cactacgcgg ctttcagttg  
 1021 caattggcac acacagaaca ggagctttaa gcggaaaatg atgctgttcg ttgagcaatc  
 1081 gttgaagaag agcaccgctg tggctggcgg aatgatgcgt atccacctgg acacgttctt  
 1141 ttccacccta aagggggcct actccctctt taccatcatt attcggatga gaaagtag

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## FIG. 8K-1

DOR19g

LOCUS XXXXX 1293 bp DNA INV 09-FEB-1999  
 DEFINITION Drosophila melanogaster odorant receptor DOR19g, GENSCAN  
 predicted complete cds.  
 ACCESSION ;  
 KEYWORDS .  
 SOURCE fruit fly.  
 ORGANISM Drosophila melanogaster  
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;  
 Pterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea;  
 Drosophilidae; Drosophila.  
 REFERENCE 1 (bases 1 to 1293)  
 AUTHORS Leslie B. Vosshall, Hubert Amrein, Pavel S. Morozov, Andrey  
 Rzhetsky and Richard Axel.  
 TITLE A Spatial Map of Olfactory Receptor Expression in the Drosophila  
 Antenna  
 JOURNAL Cell (1999) In press  
 REFERENCE 2 (bases 1 to 1293)  
 AUTHORS Celniker, S.E., Agbayani, A., Arcaina, T.T., Baxter, E., Blazej, R.G.,  
 Butenhoff, C., Champe, M., Chavez, C., Chew, M., Ciesiolka, L.,  
 Doyle, C.M., Farfan, D.E., Galle, R., George, R.A., Harris, N.L.,  
 Hoskins, R.A., Houston, K.A., Hummasti, S.R., Karra, K., Kearney, L.,  
 Kim, E., Lee, B., Lewis, S., Li, P., Lomotan, M.A., Mazda, P.,  
 Moshrefi, A.R., Moshrefi, M., Nixon, K., Pacleb, J.M., Park, S.,  
 Pfeiffer, B., Poon, L., Punch, E., Sequeira, A., Sethi, H., Snir, E.,  
 Svirskas, R.R., Twomey, B., Wan, K.H., Weinburg, T., Zhang, R.,  
 Zieran, L.L. and Rubin, G.M.  
 TITLE Sequencing of Drosophila melanogaster  
 JOURNAL Unpublished  
 REFERENCE 3 (bases 1 to 1293)  
 AUTHORS Vosshall, L.B., Amrein, H., Morozov, P.S., Rzhetsky, A. and Axel, R.  
 TITLE Direct Submission  
 JOURNAL Submitted (09-FEB-1999) Department of Biochemistry and Molecular  
 Biophysics, HHMI-Columbia University, 701 West 168th Street, New  
 York, NY 10032, USA  
 FEATURES Location/Qualifiers  
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 /note='sequence annotation for BDGP P1 clone DS01913;  
 predicted using GENSCAN; join (72218-70926)'  
 source 1..1293  
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 /db\_xref="taxon:7227"  
 /chromosome="II"  
 /map="46F5-6"  
 mRNA 1..1293  
 /gene="DOR19g"  
 gene 1..1293  
 /note="odorant receptor"  
 /gene="DOR19g"  
 exon 1..1293  
 /gene="DOR19g"  
 CDS 1..1293  
 /gene="DOR19g"  
 /note="odorant receptor"  
 /codon\_start=1  
 /product="DOR19g"

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## FIG. 8K-2

/translation="MVTEDFYKYQVWYFQILGWQLPTWAADHQRFFQSMRFGFILVI  
 LFIMLLFSFEMLNISQVREILKVFFMFATEISCMAKLLHLKLSRKLGLVDAMLS  
 PEFGVKSEQEMOMLELDRVAVVRMRNSYGIMSLGAASLILIVPCFDNFGELPLAMLEV  
 CSIEGWICYWSQYLFHSICLLPTCVLNITYDSVAYSLLCFLKVQLQMLVLRLEKLGPV  
 IEPQDNEKIAMELRECAAYNRIVRFKDLVELFIKPGSVQLMCSVLVLVSNLYDMST  
 MSIANGDAIFMLKTCIYQLVMLWQIFIIICYASNEVTQSSRLCHSIYSSQWTGWNRRAN  
 RRIVLLMMQRFNSPMLLSTFNPTFAFSLEAFGSVGQKFLYISFITGYALLLSDRQLL  
 LQLLRTAEARQQLNFETPQHLKIFKPIFKSTQNVMHVH"

BASE COUNT            290 a       322 c       307 g       374 t

ORIGIN

1	atgggttacgg	aggacttttta	taagtaccag	gtgtggtact	tccaaatcct	tggtggttgg
61	cagctcccca	cttgggccgc	agaccaccag	cgctcgttttc	agtcacatgag	gtttggcttc
121	atcctgggtca	tcctgttcat	catgctgctg	cttttctcct	tcgaaatggt	gaacaacatt
181	tcccaagtta	gggagatcct	aaagggtattc	ttcatgttcg	ccacggaaat	atcctgcatg
241	gccaaattat	tgcatttgaa	gttgaagagc	cgcaaactcg	ctggcttggg	tgatgcatg
301	ttgtccccag	agttcggcgt	taaaagttaa	caggaaatgc	agatgctgga	attggataga
361	gtggcggttg	tccgcatgag	gaactcctac	ggcatcatgt	ccctgggcgc	ggcttccctg
421	atccttatag	ttcctgtttt	cgacaacttt	ggcgagctac	cactggccat	gttggaggta
481	tgcagcatcg	agggatggat	ctgctattgg	tcgcagtacc	ttttccactc	gatttgctcg
541	ctgcccactt	gtgtgctgaa	tataacctac	gactcgggtg	cctactcgtt	gctctgtttc
601	ttgaagggtc	agctacaaaat	gctggctcctg	cgattagaaa	agttgggtcc	tgtgatcgaa
661	ccccaggata	atgagaaaaat	cgcaatggaa	ctgcgtgagt	gtgccgccta	ctacaacagg
721	attgttcggt	tcaaggacct	ggtggagctg	ttcataaagg	ggccaggatc	tgtgcagctc
781	atgtgttctg	ttctgggtgt	ggtgtccaac	ctgtacgaca	tgccaccat	gtccattgca
841	aacggcgatg	ccatctttat	gctcaagacc	tgtatctatc	agctggtgat	gctctggcag
901	atcttcatca	tttgttacgc	ctccaacgag	gtaactgtcc	agagctctag	gttgtgtcac
961	agcatctaca	gctcccaatg	gacgggatgg	aacagggcaa	accgccggat	tgtccttctc
1021	atgatgcagc	gctttaattc	cccgatgctc	ctgagcacct	ttaacccac	ctttgctttc
1081	agcttggagg	cccttgggtc	tgtagggcag	cagaaattcc	tttatatata	atttattact
1141	ggttatgctc	ttctcctttc	agatcgtcaa	ctgctcctac	agctacttcg	cactgctgaa
1201	gcgcgtcaac	agttaaattt	cgaaacaccg	cagcacctaa	agattttcaa	gccgattttt
1261	aaaagcactc	aaaacgttat	gcacgtacat	taa		

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**FIG. 8L-1**

DOR24g

LOCUS XXXXX 2075 bp DNA INV 09-FEB-1999  
 DEFINITION *Drosophila melanogaster* odorant receptor DOR24g, GENSCAN  
 predicted complete cds.  
 ACCESSION ;  
 KEYWORDS .  
 SOURCE fruit fly.  
 ORGANISM *Drosophila melanogaster*  
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;  
 Pterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea;  
 Drosophilidae; *Drosophila*.  
 REFERENCE 1 (bases 1 to 2075)  
 AUTHORS Leslie B. Vosshall, Hubert Amrein, Pavel S. Morozov, Andrey  
 Rzhetsky and Richard Axel.  
 TITLE A Spatial Map of Olfactory Receptor Expression in the *Drosophila*  
 Antenna  
 JOURNAL Cell (1999) In press  
 REFERENCE 2 (bases 1 to 2075)  
 AUTHORS Celniker, S.E., Agbayani, A., Arcaina, T.T., Baxter, E., Blazej, R.G.,  
 Butenhoff, C., Champe, M., Chavez, C., Chew, M., Ciesiolka, L.,  
 Doyle, C.M., Farfan, D.E., Galle, R., George, R.A., Harris, N.L.,  
 Hoskins, R.A., Houston, K.A., Hummasti, S.R., Karra, K., Kearney, L.,  
 Kim, E., Lee, B., Lewis, S., Li, P., Lomotan, M.A., Mazda, P.,  
 Moshrefi, A.R., Moshrefi, M., Nixon, K., Pacleb, J.M., Park, S.,  
 Pfeiffer, B., Poon, L., Punch, E., Sequeira, A., Sethi, H., Snir, E.,  
 Svirskas, R.R., Twomey, B., Wan, K.H., Weinburg, T., Zhang, R.,  
 Zieran, L.L. and Rubin, G.M.  
 TITLE Sequencing of *Drosophila melanogaster*  
 JOURNAL Unpublished  
 REFERENCE 3 (bases 1 to 2075)  
 AUTHORS Vosshall, L.B., Amrein, H., Morozov, P.S., Rzhetsky, A. and Axel, R.  
 TITLE Direct Submission  
 JOURNAL Submitted (09-FEB-1999) Department of Biochemistry and Molecular  
 Biophysics, HHMI-Columbia University, 701 West 168th Street, New  
 York, NY 10032, USA  
 FEATURES Location/Qualifiers  
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 /note='putative seven transmembrane G protein coupled  
 receptor'  
 /note='sequence annotation for BDGP P1 clone DS00724;  
 predicted using GENSCAN; join (62623-64697)'  
 source 1..2075  
 /organism="*Drosophila melanogaster*"  
 /db\_xref="taxon:7227"  
 /chromosome="II"  
 /map="47D6-E2"  
 mRNA join(1..185,739..1038,1338..1953,2025..2075)  
 /gene="DOR24g"  
 gene 1..2075  
 /note="odorant receptor"  
 /gene="DOR24g"  
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 /gene="DOR24g"  
 /note="odorant receptor"  
 /codon\_start=1  
 /product="DOR24g"



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FIG. 8L-2

/translation="MRPTLQVLISVLCLVSAYAWDHTDCNDHYIEFMDYPDERATAYS  
 NESSEWDFFEWVRQVFLFLQVQKSTIALLGFDLFSENREMWKRPYRAMNVFSIAAIF  
 PFILAAVLHNWKNVLLADAMVALLITILGLFKFSMILYLRDRFKRLIDKFRLMSNG  
 EFPWNHIIIRNYVLSFIWSAFASFGVVLPAVSLDTIFCSFTSNLCAFFKIAQYKVR  
 FKGGSLKESQATLNKVFALYQTSLDMCNDLNQCYQPIICAQFFISSLQCLMLGYLFSI  
 TFAQTEGVYASFIATIIIIQAYIYCYCGENLKTESASFEWAIYDSPWHESLGAGGAST  
 SICRSLISMRAHRGFRITGYFFEANMEAFSSIVRTAMSYITMLRSFS"

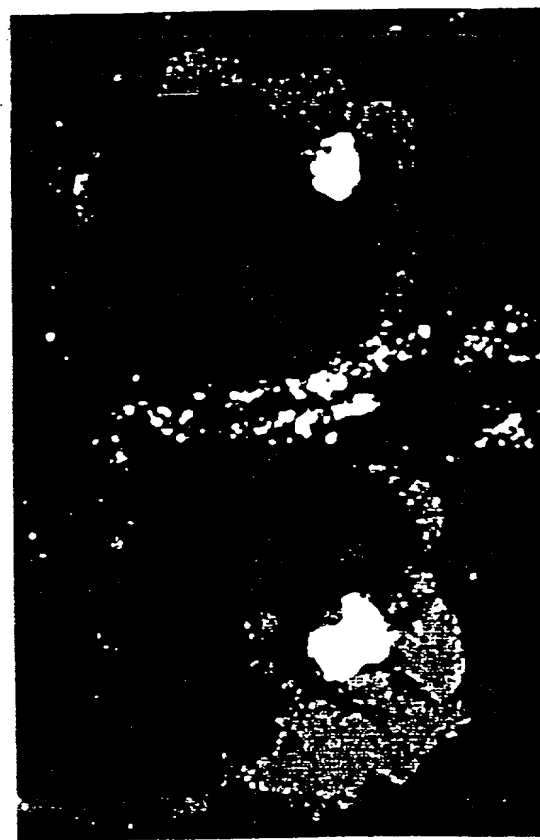
exon 1..185  
 /gene="DOR24g"  
 intron 186..738  
 /gene="DOR24g"  
 exon 739..1038  
 /gene="DOR24g"  
 intron 1039..1337  
 /gene="DOR24g"  
 exon 1338..1953  
 /gene="DOR24g"  
 intron 1954..2024  
 /gene="DOR24g"  
 exon 2025..2075  
 /gene="DOR24g"

BASE COUNT 548 a 460 c 447 g 620 t

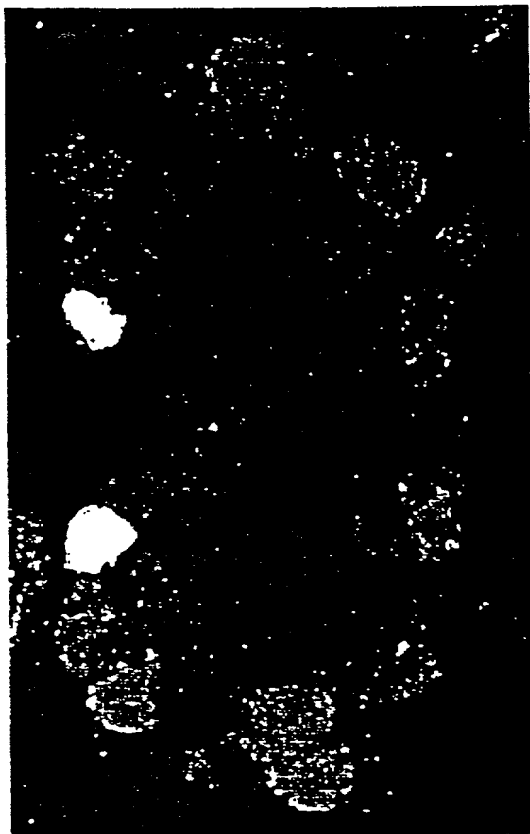
ORIGIN

1 atgcgccecaa cactccaggt cctcatcagt gtcctttgtc tggctctctgc ctacgcctgg  
 61 gatcataccg actgtaacga tcactatata gaattcatgg actatcccga tgagagagct  
 121 accgcctata gcaatgaatc ctcagaatgg gatttctttg aatttttgag gcaagtgttt  
 181 ggccctgtagc aattctgaca tcgctgacca cgccctctggt caaagcaatc acttggcgag  
 241 acatgtgacc ctcggatgtc agggcggtgaa taaagaacat taaaatttaa ccggagttct  
 301 catttactat gcctaaagag gtgtcaaacg gaggtattat ttgggcgtga tatattatac  
 361 cctctaaagg agtatcccca ccagggtgaaa cctataaaaa cccttgacgt cgtaaatgga  
 421 aagtactgaa ccggaaaatga aagtgggcac tttctaattg tagaaatttg tcgggargaa  
 481 atatataagt agatatatat aatattatat cttgattatc cagcatcaat cacaagataa  
 541 aaaaaaata taattcataa ttcataattc atatgtaata ggcatttgta aatgttgtaa  
 601 acaaaggaag ggtattaaag agctgtactt tcgcatctgt atttcattta ttcctactca  
 661 attgaaaggt ttaaaacccc tgaactgaac acacttgact tagtgtgagg ccgaattaac  
 721 ccttgctgac atggacagtt ttctgcaagt acagaagagc accattgccc ttctgggctt  
 781 tgatctcttt agtgaataat gagaaatgtg gaaacgcccc tatagagcaa tgaatgtgtt  
 841 tagcatagct gccatttttc cctttatctt ggcagctgtg ctccataatt ggaagaatgt  
 901 attgctgctg gccgatgcca tgggtggcct actaataacc attctgggcc tttcaagtt  
 961 tagcatgata ctttacttac gtcgcgattt caagcgactg attgacaaat ttcgtttgct  
 1021 catgtcgaat ggtgagttgt aatccatttc ggccagaatg tgtatcattt catttattat  
 1081 tttatagagg cggaaacaggg cgaggaatac gccgagattc tcaacgcagc aaacaagcag  
 1141 gatcaacgaa tgtgcactct gtttaggact tgtttctctc tcgcctgggc cttgaatagt  
 1201 gttctgcccc tcgtgagaat gggctctcagc tattgggttag caggtcatgc agagcccgag  
 1261 ttgccttttc cctgtctgta tgtacaaatg atatatatga tatatggtga tcaagttatc  
 1321 aggcctttgtt cctaaagttt tccctggaat atccacatca ttcgcaatta tgttttgagc  
 1381 ttcactctgga gcgctttcgc ctcgacaggt gtgggttttac ctgctgtcag cttggatacc  
 1441 atattctgtt ccttcaccag caacctgtgc gccttcttca aaattgcgca gtacaagggtg  
 1501 gttagattta agggcgatc ccttaaagaa tcacaggcca cattgaacaa agtctttgcc  
 1561 ctgtaccaga ccagcttgga tatgtgcaac gatctgaatc agtgctacca accgattatc  
 1621 tgcgcccagt tcttcatttc atctctgcaa ctctgcagtc tgggatatct gttctccatt  
 1681 acttttgccc agacagaggg cgtctactat gcctcattca tagccacaat tttcatacaa  
 1741 gccttatctt actgctactg cgggggagaa cgtgaagacgg agagtgcag cttcagtggtg  
 1801 gccatctacg acagtccgtg gcacgagagt ttgggtgctg gtggagcctc tacctcgatc  
 1861 tgccgatcct tgctgatcag catgatgcgg gctcatcggt gattccgcat tacgggatac  
 1921 tttttcgagg caaacatgga ggcccttctca tcgggtgggtg aatcatttcc attgtacaat  
 1981 acatggattt acatgaatac tcttttctaa ctttcggtt ttagattgtt cgcacggcga  
 2041 tgcctacat cacaatgctg agatcattct cctaa

FIG. 9



**DOR20-GAL4:UAS-NsybGFP**



**DOR24-GAL4:UAS-NsybGFP**



**DOR25-GAL4:UAS-NsybGFP**



**DOR53-GAL4:UAS-NsybGFP**



FIG. 10A-2

DOR119	LLVVTITL	330	340	350	360	370	380	390	400
DOR118	FMVITITL	330	340	350	360	370	380	390	400
DOR117	VAYINGLM	330	340	350	360	370	380	390	400
DOR120	VSIIVAICT	330	340	350	360	370	380	390	400
DOR53	CLRMFVISM	330	340	350	360	370	380	390	400
DOR67	VLSMFCVSN	330	340	350	360	370	380	390	400
DOR117	LSRMAYLLE	330	340	350	360	370	380	390	400
DOR31	GVYITIAIS	330	340	350	360	370	380	390	400
DOR81	VIVVMAYLT	330	340	350	360	370	380	390	400
DOR30	IIYLLAYTIG	330	340	350	360	370	380	390	400
DOR119	...	410	420	430	440	450	460	470	480
DOR118	...	410	420	430	440	450	460	470	480
DOR117	...	410	420	430	440	450	460	470	480
DOR120	...	410	420	430	440	450	460	470	480
DOR53	...	410	420	430	440	450	460	470	480
DOR67	...	410	420	430	440	450	460	470	480
DOR117	...	410	420	430	440	450	460	470	480
DOR31	...	410	420	430	440	450	460	470	480
DOR81	...	410	420	430	440	450	460	470	480
DOR30	...	410	420	430	440	450	460	470	480

### ClustalW Alignment of the DOR64 Family

